STEP AHEAD
Golden Books
WORKBOOK

Plus 32 Flash Cards

Pokémon™

Math Challenge Grade 4

59
×67

2⟌94

Gotta catch 'em all!™

$5.99 U.S. / $8.99 CAN.
ISBN: 0-307-30614-3
50599>
9 780307 306142

Trainer Level

#72
TENTACOOL™

Trainer Level

#88
GRIMER™

Trainer Level

#116
HORSEA™

Trainer Level

#122
MR. MIME™

Trainer Level

#02
IVYSAUR™

Trainer Level

#133
EEVEE™

Trainer Level

#10
CATERPIE™

Trainer Level

#23
EKANS™

PORTAGE COUNTY DISTRICT LIBRARY

Grade 4

$$\begin{array}{r} 465 \\ +725 \\ \hline \end{array}$$

© 2000 Nintendo

Answer: 1,190

Grade 4

$$\begin{array}{r} 3,591 \\ +1,931 \\ \hline \end{array}$$

© 2000 Nintendo

Answer: 5,522

Grade 4

$$\begin{array}{r} 4,967 \\ +5,525 \\ \hline \end{array}$$

© 2000 Nintendo

Answer: 10,492

Grade 4

$$\begin{array}{r} 7,639 \\ -\ 893 \\ \hline \end{array}$$

© 2000 Nintendo

Answer: 6,746

Grade 4

$$\begin{array}{r} 7,311 \\ -1,677 \\ \hline \end{array}$$

© 2000 Nintendo

Answer: 5,634

Grade 4

$$\begin{array}{r} 9,077 \\ -2,893 \\ \hline \end{array}$$

© 2000 Nintendo

Answer: 6,184

Grade 4

$$\begin{array}{r} 5,003 \\ -1,005 \\ \hline \end{array}$$

© 2000 Nintendo

Answer: 3,998

Grade 4

$$\begin{array}{r} 2,843 \\ +1,965 \\ \hline \end{array}$$

© 2000 Nintendo

Answer: 4,808

Front

Missing page
Flash cards
2/4

Back

Missing page
Flash cards
2/4

Finding Place Value

In a number like 5,362, each digit gets its value from its place in the number. Here is a place value chart:

Name	thousands	hundreds	tens	ones
Value	1,000	100	10	1

This is the standard form. 5,362 = 5,000 + 300 + 60 + 2

5,362 = 5 **thousands** + 3 **hundreds** + 6 **tens** + 2 **ones**

These are called expanded forms.

Write these numbers in both expanded forms.

1. 2,247 = 2000 + 200 + 40 + 7

   2,247 = ___ thousands + ___ hundreds + ___ tens + ___ ones

2. 7,836 = _____

   7,836 = ___ thousands + ___ hundreds + ___ tens + ___ ones

3. 9,570 = _____

   9,570 = ___ thousands + ___ hundreds + ___ tens + ___ ones

4. 3,078 = _____

   3,078 = ___ thousands + ___ hundreds + ___ tens + ___ ones

*SKILLS: understanding place value; writing expanded forms

Big-Time Addition

To add numbers like 4,623 + 3,897 you will need to regroup 3 times!

Add ones.	Regroup and add tens	Regroup and add hundreds.	Regroup and add thousands.
$\overset{1}{}$	$\overset{1\,1}{}$	$\overset{1\,1}{}$	$\overset{1}{}$
4,623	4,623	4,623	4,623
+ 3,897	+ 3,897	+ 3,897	+ 3,897
0	20	520	8,520

Add.

Don't forget to regroup!

1. $\overset{1\,1}{}$

214	553	465
+ 596	+ 349	+ 725
810		

2.

6,677	3,591	2,431
+ 2,324	+ 1,931	+ 4,593

3.

7,773	6,839	4,967
+ 1,235	+ 6,492	+ 5,525

Bright Ideas

When adding big stacks, you can check your addition by adding up ↑ as well as down ↓.

$$\begin{array}{r} 4 \\ \uparrow\ 3 \\ +\ 9 \end{array} \Big\} \begin{array}{l} 12 + 4 = 16 \\ 9 + 3 = 12 \end{array}$$

Try some 3-deckers!

4. $\overset{1\,1}{}$

2,414	1,122	6,781
1,213	6,989	4,985
+ 5,469	+ 7,276	+ 8,076
9,096		

*SKILL: adding three and four-digit numbers with regrouping (carrying)

Subtraction Brush-up

Subtract.

Use your answers to fill in the puzzle.

ACROSS:

1. $\begin{array}{r} 269 \\ -\ 141 \\ \hline 128 \end{array}$

3. $\begin{array}{r} 521 \\ -\ 120 \\ \hline \end{array}$

5. $\begin{array}{r} 433 \\ -\ 210 \\ \hline \end{array}$

6. $\begin{array}{r} 876 \\ -\ 302 \\ \hline \end{array}$

7. $\begin{array}{r} 7{,}637 \\ -6{,}635 \\ \hline \end{array}$

9. $\begin{array}{r} 956 \\ -\ 634 \\ \hline \end{array}$

10. $\begin{array}{r} 956 \\ -\ 901 \\ \hline \end{array}$

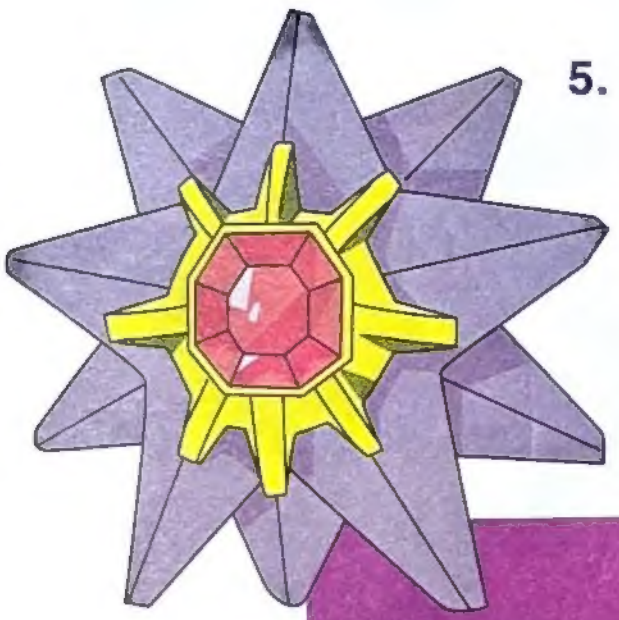
11. $\begin{array}{r} 9{,}498 \\ -7{,}167 \\ \hline \end{array}$

DOWN:

1. $\begin{array}{r} 6{,}879 \\ -5{,}549 \\ \hline \end{array}$

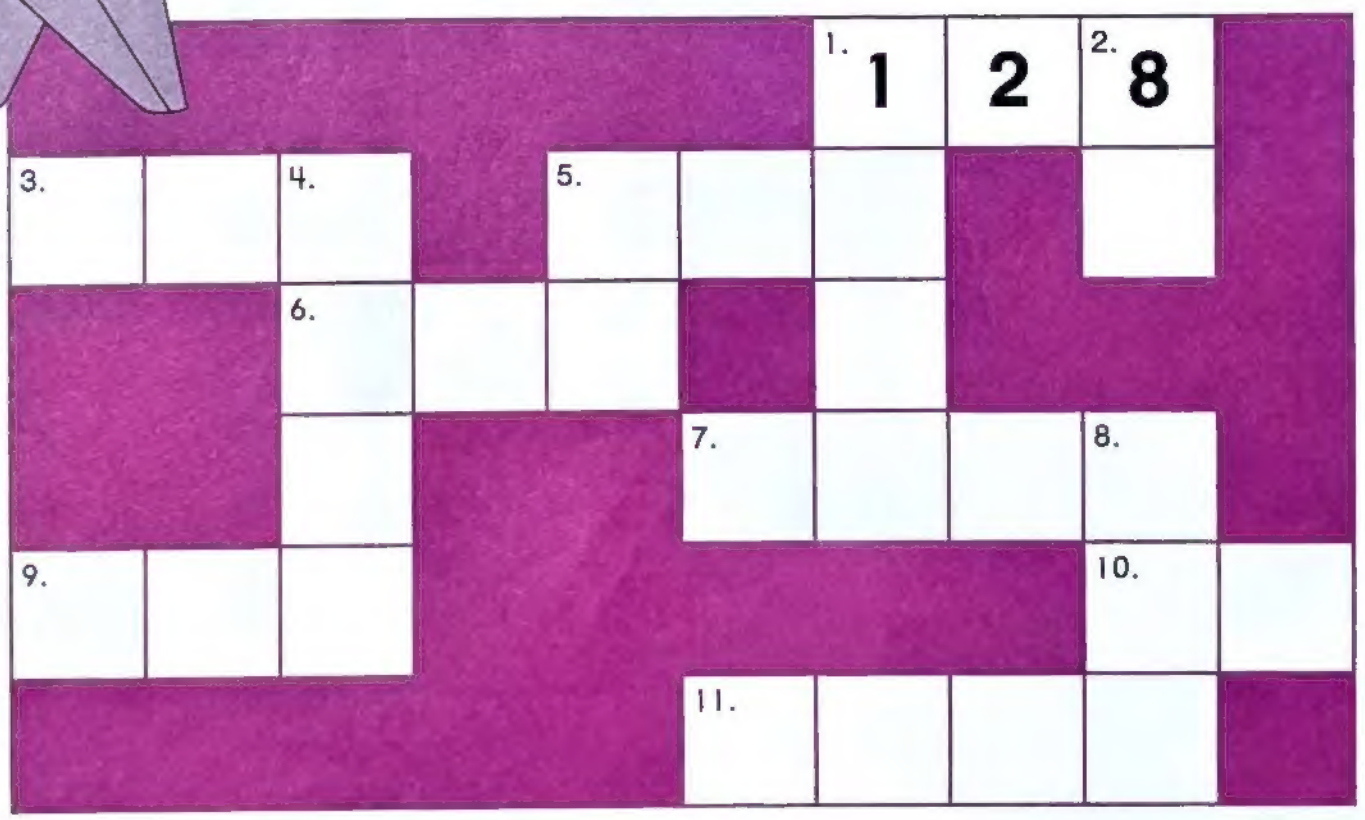
2. $\begin{array}{r} 687 \\ -602 \\ \hline \end{array}$

4. $\begin{array}{r} 9{,}628 \\ -8{,}126 \\ \hline \end{array}$



5. $\begin{array}{r} 867 \\ -\ 843 \\ \hline \end{array}$

8. $\begin{array}{r} 978 \\ -727 \\ \hline \end{array}$



*SKILL: subtracting three and four-digit numbers

Number Search

When you subtract some 4-digit numbers you will have to regroup three times!

Regroup 1 ten. Subtract ones.	Regroup 1 hundred. Subtract tens.	Regroup 1 thousand. Subtract hundreds.	Subtract thousands.
2 12 5,4~~3~~2 − 1,967 5	3 12 5,~~4~~32 − 1,967 65	4 13 ~~5~~,432 − 1,967 465	4 ~~5~~,432 − 1,967 3,465

Subtract. Find your answers in the puzzle. Some are across and some are down.

1. 6 11 ~~7~~ ~~1~~5 − 283 = 432

816 − 709 =

2. 789 − 199 =

7,946 − 4,198 =

3. 7,639 − 893 =

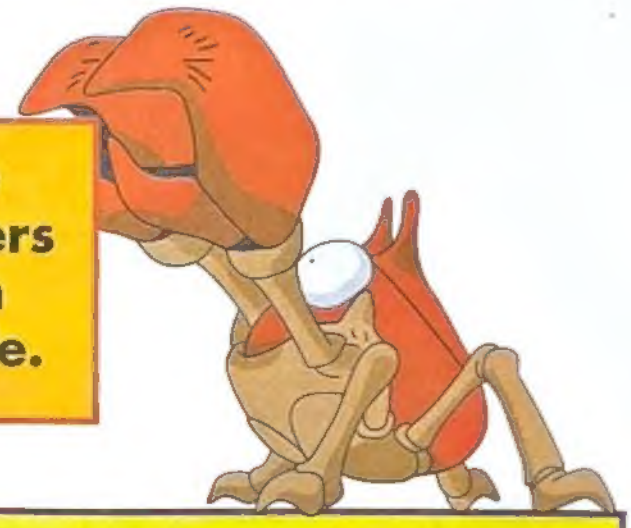
3,683 − 2,836 =

4. 7,897 − 1,919 =

7,311 − 1,677 =

5. 7,969 − 3,988 =

2,837 − 1,943 =



Circle the 10 answers hidden in the puzzle.

2	8	9	2	1	5	2
8	3	5	9	0	6	1
7	4	8	6	7	4	5
4	3	4	9	3	3	3
5	9	7	8	9	2	7
5	6	3	4	8	9	4
6	7	4	6	1	7	8

*SKILL: subtracting three and four-digit numbers with regrouping (borrowing)

Subtraction from Zeros

Here's a way to subtract from zeros.

3,003 −1,539	To subtract 9 from 3, you must regroup. But you cannot take 1 ten from 0 tens. So regroup and take 1 ten from 300 tens. That leaves 299 tens. Now subtract.	2 99 13 3,003 −1,539 1,464

Subtract.

1.	2 9 17 3,076 −1,385 1,691	8,306 −3,964	9,077 −2,893
2.	5,003 −1,005	8,006 −1,009	2,309 −1,654
3.	6,002 −4,676	4,810 −1,964	1,200 −1,144
4.	4,059 −3,277	3,200 −1,306	4,400 −3,340
5.	5,006 − 479	9,004 −6,393	2,600 −1,111

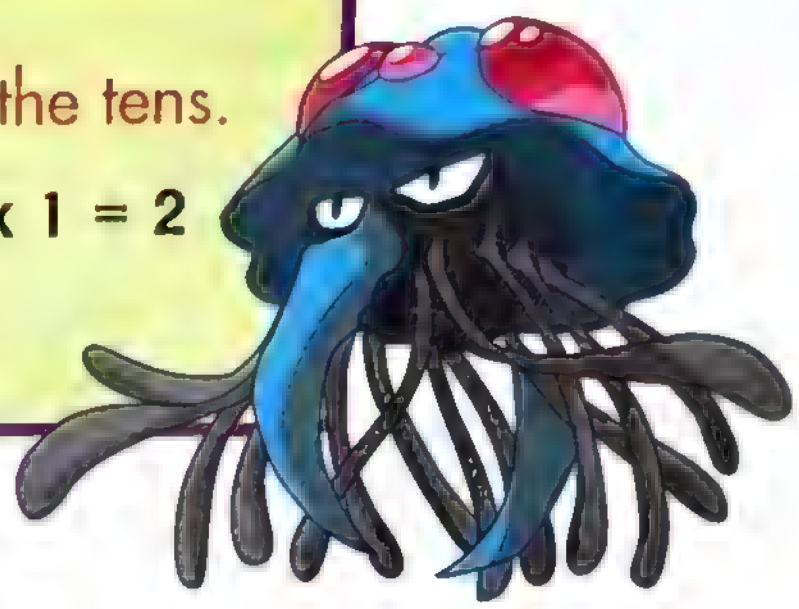
How many can you get right on the first try?

*SKILL: understanding subtraction with zeros

Multiply in Two Steps

Misty saw **2** Tentacruel. Each Tentacruel had **14** tentacles.
How many tentacles were there in all?

Step 1: Multiply the ones.	Step 2: Multiply the tens.
14 x 2 8 **2 x 4 = 8**	14 x 2 28 **2 x 1 = 2**



✎ Multiply. Use two steps.

1. 34 x 2 = 8 ↓ 6 ↓ = 68

2. 23 x 3 = ↓ ↓ = 69

3. 86 x 1 = ↓ ↓ = 86

4. 74 x 2 = ↓ ↓ = 148

✎ Multiply. Write the two steps together.

5. 63 x 2 = 126

6. 52 x 4 = 208

7. 41 x 6 = 246

8. 90 x 5 = 450

9. 83 x 3 = 249

10. 49 x 1 = 49

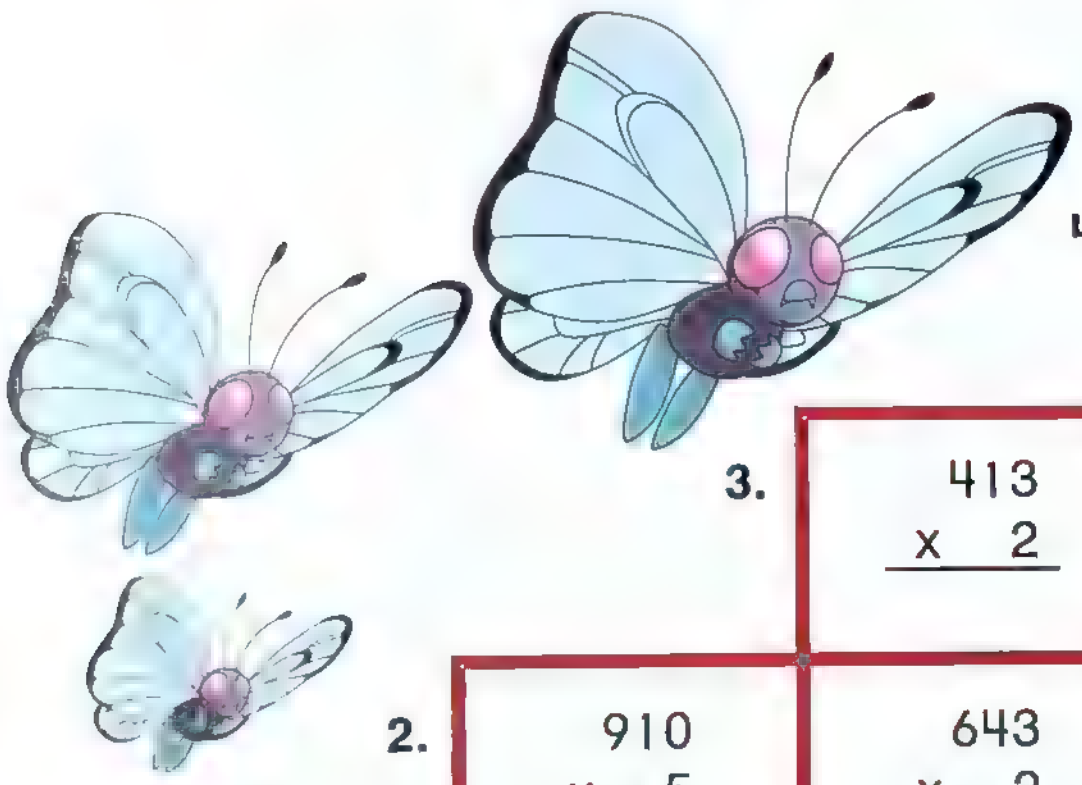
*SKILL: multiplying without regrouping (two-digit by one-digit)

Multiply in Three Steps

Venusaur weighs 220 pounds. How much would 3 Venusaur weigh all together?

Step 1: Multiply the ones.	Step 2: Multiply the tens.	Step 3: Multiply the hundreds.
220 x 3 0	220 x 3 60	220 x 3 660 pounds

Start at the bottom. Multiply.
See how fast you can get to the top step.



5.				701 x 5
4.			122 x 4	834 x 2
3.		413 x 2	511 x 7	623 x 3
2.	910 x 5	643 x 2	832 x 3	501 x 6
1.	324 x 2	332 x 3	812 x 4	679 x 1	744 x 2

*SKILL: multiplying without regrouping (three-digit by one-digit)

Regroup the Ones

Each Vulpix has 6 tails. How many tails would there be on 13 Vulpix?

Step 1:

$$\begin{array}{r} {\scriptstyle 1} \\ 13 \\ \times\ \ 6 \\ \hline 8 \end{array}$$

Multiply the ones.
$6 \times 3 = 18$
Write the 8. Put the 1 above the tens place.

Step 2:

$$\begin{array}{r} {\scriptstyle 1} \\ 13 \\ \times\ \ 6 \\ \hline 78 \end{array}$$

Multiply the tens.
$6 \times 1 = 6$
Add the 1.
$6 + 1 = 7$

Multiply.

1.

$$\begin{array}{r} {\scriptstyle 3} \\ 47 \\ \times\ \ 5 \\ \hline 235 \end{array} \qquad \begin{array}{r} 38 \\ \times\ \ 3 \\ \hline \end{array} \qquad \begin{array}{r} 215 \\ \times\ \ 4 \\ \hline \end{array} \qquad \begin{array}{r} 63 \\ \times\ \ 6 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 107 \\ \times\ \ 8 \\ \hline \end{array} \qquad \begin{array}{r} 59 \\ \times\ \ 2 \\ \hline \end{array} \qquad \begin{array}{r} 326 \\ \times\ \ 3 \\ \hline \end{array} \qquad \begin{array}{r} 84 \\ \times\ \ 7 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 43 \\ \times\ \ 9 \\ \hline \end{array} \qquad \begin{array}{r} 417 \\ \times\ \ 3 \\ \hline \end{array} \qquad \begin{array}{r} 25 \\ \times\ \ 6 \\ \hline \end{array} \qquad \begin{array}{r} 78 \\ \times\ \ 4 \\ \hline \end{array}$$

4.

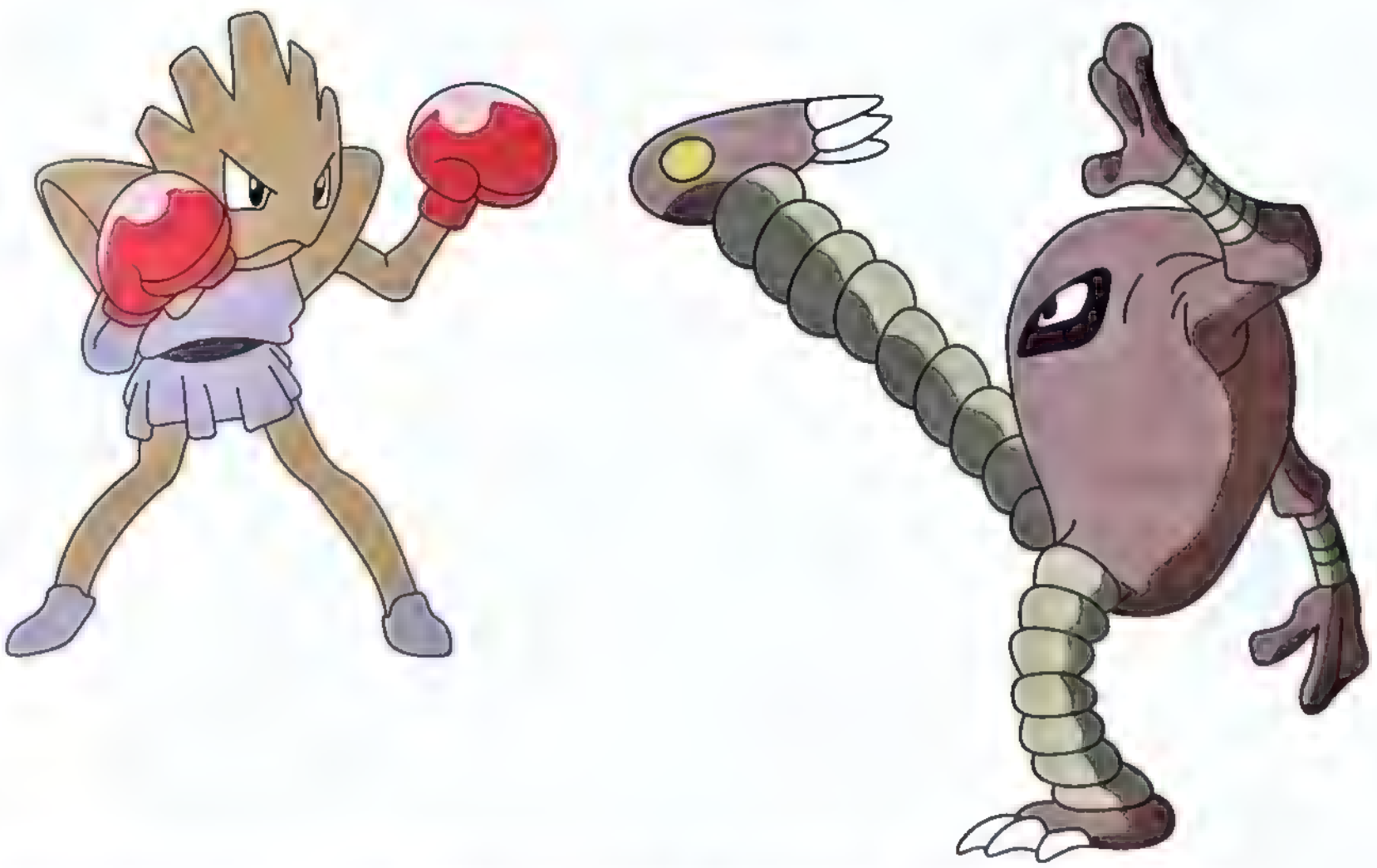
$$\begin{array}{r} 39 \\ \times\ \ 9 \\ \hline \end{array} \qquad \begin{array}{r} 62 \\ \times\ \ 8 \\ \hline \end{array} \qquad \begin{array}{r} 128 \\ \times\ \ 3 \\ \hline \end{array} \qquad \begin{array}{r} 706 \\ \times\ \ 9 \\ \hline \end{array}$$

*SKILL: multiplying with regrouping ones

More Multiplying

Multiply.

1.	2 54 x 7 378	18 x 4	46 x 8	83 x 5
2.	94 x 6	35 x 9	76 x 3	68 x 7
3.	56 x 2	19 x 9	33 x 4	92 x 5
4.	25 x 8	74 x 3	56 x 6	17 x 5
5.	29 x 6	37 x 3	64 x 4	75 x 5



Regroup the Tens

When you multiply hundreds, tens, and ones, you may need to regroup twice.

Step 1:

$$\begin{array}{r} {\scriptstyle 2} \\ 653 \\ \times\ \ 7 \\ \hline 1 \end{array}$$

Multiply the ones.
$7 \times 3 = 21$
Write the 1. Put the 2 above the tens place.

Step 2:

$$\begin{array}{r} {\scriptstyle 3\,2} \\ 653 \\ \times\ \ 7 \\ \hline 71 \end{array}$$

Multiply the tens and add the 2.
$7 \times 5 = 35; 35 + 2 = 37$
Write the 7 in the tens place. Put the 3 above the hundreds place.

Step 3:

$$\begin{array}{r} {\scriptstyle 3\,2} \\ 653 \\ \times\ \ 7 \\ \hline 4571 \end{array}$$

Multiply the hundreds and add the 3.
$7 \times 6 = 42; 42 + 3 = 45$
Write the 45.

Multiply.

1. $\begin{array}{r} 543 \\ \times\ \ 4 \\ \hline 2172 \end{array}$ $\begin{array}{r} 256 \\ \times\ \ 5 \\ \hline \end{array}$ $\begin{array}{r} 418 \\ \times\ \ 7 \\ \hline \end{array}$ $\begin{array}{r} 639 \\ \times\ \ 3 \\ \hline \end{array}$

2. $\begin{array}{r} 560 \\ \times\ \ 6 \\ \hline \end{array}$ $\begin{array}{r} 327 \\ \times\ \ 3 \\ \hline \end{array}$ $\begin{array}{r} 176 \\ \times\ \ 2 \\ \hline \end{array}$ $\begin{array}{r} 925 \\ \times\ \ 8 \\ \hline \end{array}$

3. $\begin{array}{r} 434 \\ \times\ \ 5 \\ \hline \end{array}$ $\begin{array}{r} 816 \\ \times\ \ 8 \\ \hline \end{array}$ $\begin{array}{r} 749 \\ \times\ \ 3 \\ \hline \end{array}$ $\begin{array}{r} 459 \\ \times\ \ 2 \\ \hline \end{array}$

*SKILL: multiplying with regrouping tens

Practice

Multiply. Use your answers to fill in the spaces below.

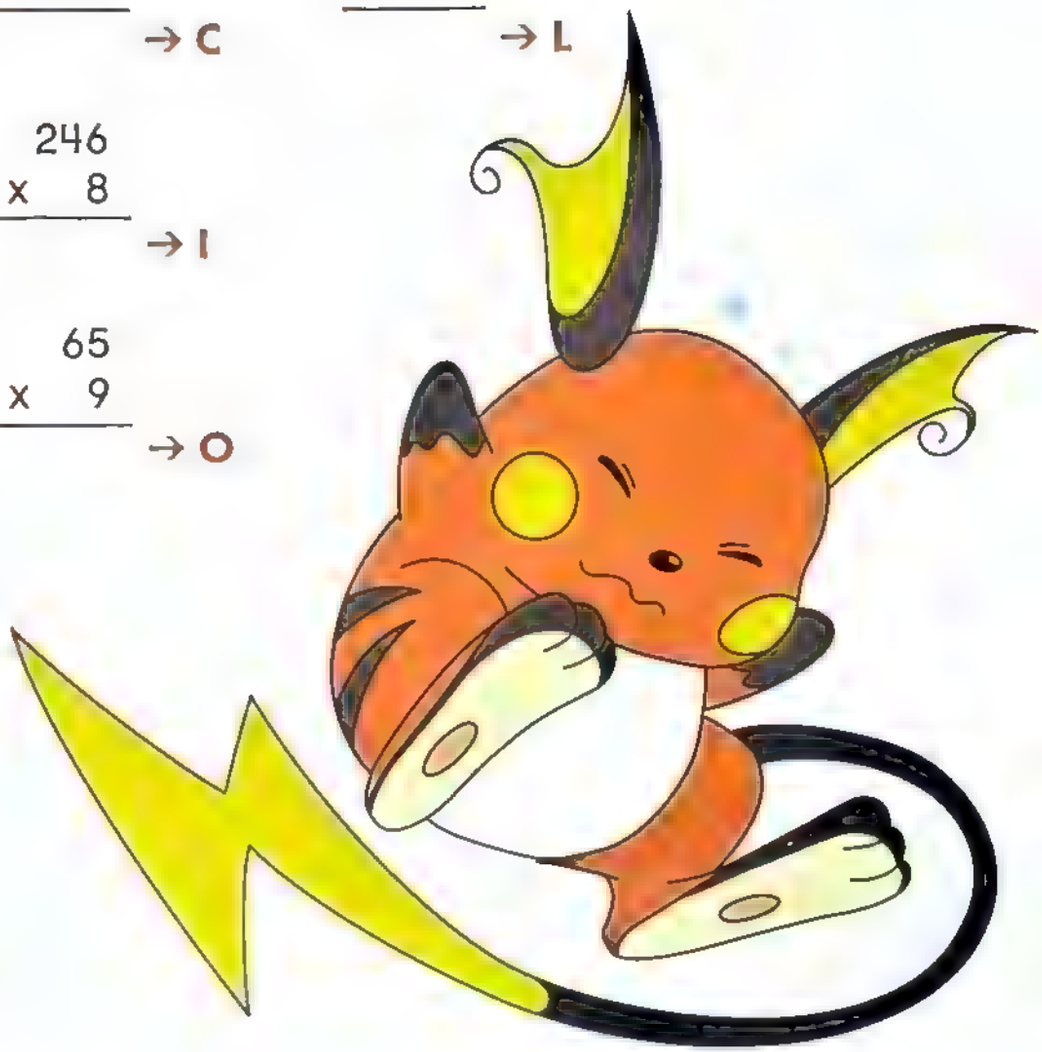
$$\begin{array}{r} 572 \\ \times\ 3 \\ \hline 1716 \end{array} \rightarrow \mathbf{T} \qquad \begin{array}{r} 164 \\ \times\ 4 \\ \hline \end{array} \rightarrow \mathbf{N} \qquad \begin{array}{r} 381 \\ \times\ 2 \\ \hline \end{array} \rightarrow \mathbf{E}$$

$$\begin{array}{r} 207 \\ \times\ 5 \\ \hline \end{array} \rightarrow \mathbf{H} \qquad \begin{array}{r} 463 \\ \times\ 7 \\ \hline \end{array} \rightarrow \mathbf{G} \qquad \begin{array}{r} 608 \\ \times\ 2 \\ \hline \end{array} \rightarrow \mathbf{Y}$$

$$\begin{array}{r} 591 \\ \times\ 6 \\ \hline \end{array} \rightarrow \mathbf{V} \qquad \begin{array}{r} 87 \\ \times\ 4 \\ \hline \end{array} \rightarrow \mathbf{C} \qquad \begin{array}{r} 236 \\ \times\ 3 \\ \hline \end{array} \rightarrow \mathbf{L}$$

$$\begin{array}{r} 93 \\ \times\ 5 \\ \hline \end{array} \rightarrow \mathbf{R} \qquad \begin{array}{r} 246 \\ \times\ 8 \\ \hline \end{array} \rightarrow \mathbf{I}$$

$$\begin{array}{r} 351 \\ \times\ 4 \\ \hline \end{array} \rightarrow \mathbf{M} \qquad \begin{array}{r} 65 \\ \times\ 9 \\ \hline \end{array} \rightarrow \mathbf{O}$$



Where does Ash's Pikachu beat Raichu?

1716 1035 762

3546 762 465 1404 1968 708 1968 585 656

348 1968 1716 1216 3241 1216 1404

Do You Regroup?

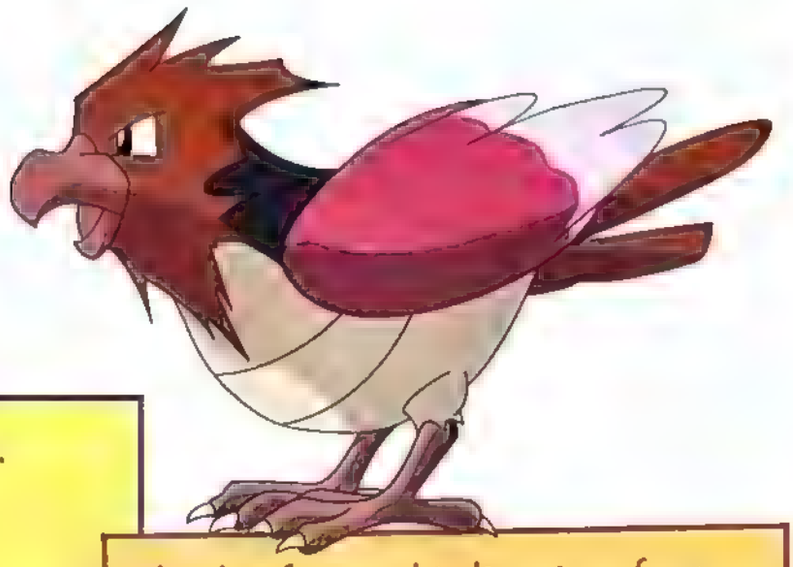
Multiply. As you go, circle the problems that need regrouping to lead Misty to Psyduck.

1. 74 x 3 = 222	2. 213 x 4 =	3. 83 x 2 =	4. 512 x 4 =
5. 621 x 3 =	6. 826 x 2 =	7. 407 x 6 =	8. 301 x 9 =
9. 523 x 3 =	10. 712 x 4 =	11. 845 x 2 =	12. 223 x 3 =
13. 721 x 2 =	14. 142 x 2 =	15. 616 x 6 =	16. 125 x 3 =

*SKILLS: multiplying three-digit numbers; determining when to regroup

Division

Brock saw 24 Spearow in a tree. There were 4 Spearow sitting on each branch. How many branches were on the tree?



You can find out by using division.

24 ÷ 4 =

Twenty-four divided by four equals six.

Think of a multiplication fact.

4 x 5 = 20
4 x 6 = 24
4 x 7 = 28

Fill in the blanks.

1. 6 x 2 = ____, so 4 x 5 = ____, so

   12 ÷ 2 = ____ 20 ÷ 5 = ____

2. ____ x 3 = 21, so ____ x 4 = 32, so

   21 ÷ 3 = ____ 32 ÷ 4 = ____

Divide.

3. 10 ÷ 5 = ____ 18 ÷ 3 = ____

4. 12 ÷ 3 = ____ 35 ÷ 5 = ____

5. 14 ÷ 2 = ____ 36 ÷ 4 = ____

6. 8 ÷ 1 = ____ 15 ÷ 3 = ____

More Division

Nurse Joy had 56 injured Pokémon resting in 7 rows.
How many Pokémon were in each row?

56	÷	7	=	8
dividend		**divisor**		**quotient**

8 x 7 = 56
so 56 ÷ 7 = 8

Here is another way to show division:

8 → quotient
divisor → 7 ⟌56 → dividend

Divide.

1. 48 ÷ 8 = ____ 54 ÷ 6 = ____

2. 36 ÷ 9 = ____ 35 ÷ 7 = ____

3. 6 ⟌42 2 ⟌16 8 ⟌24

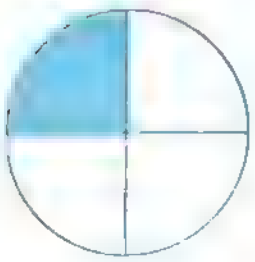
4. 1 ⟌9 9 ⟌45 3 ⟌18

5. 7 ⟌21 6 ⟌48 5 ⟌20

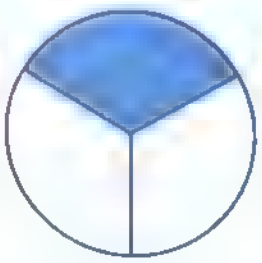
*SKILL: dividing by one, two, three, five, six, seven, eight, and nine

Fractions

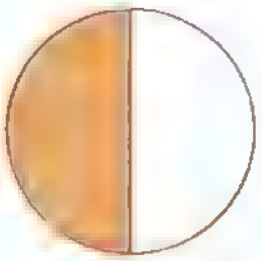
Each fraction below tells how much of the circle is shaded.



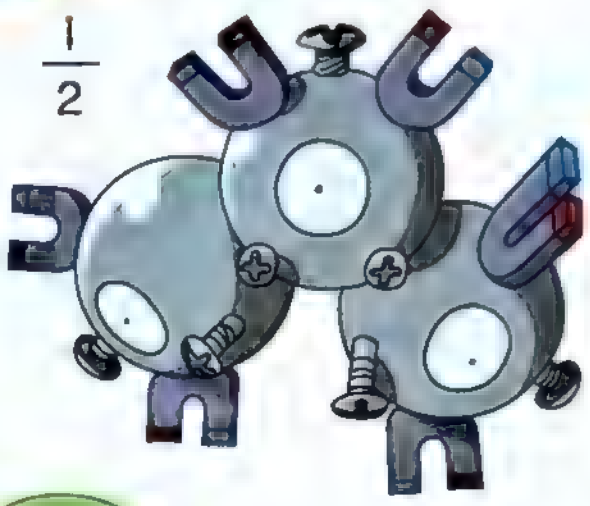
$\frac{1}{4}$



$\frac{1}{3}$

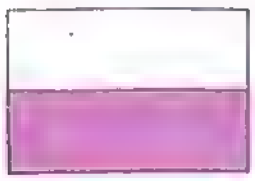


$\frac{1}{2}$

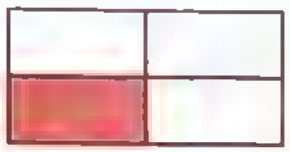


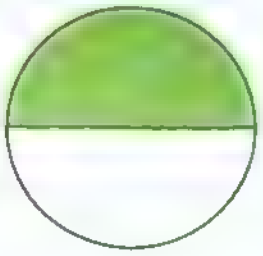
Write a fraction for the shaded part.

1.

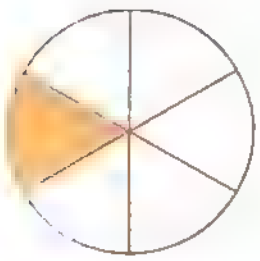


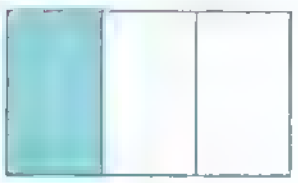
$\frac{1}{2}$

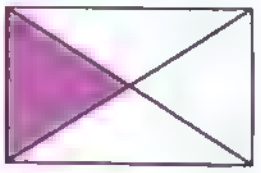




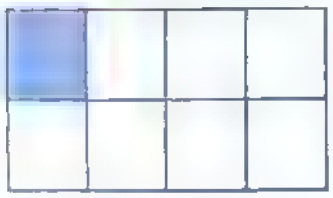
2.

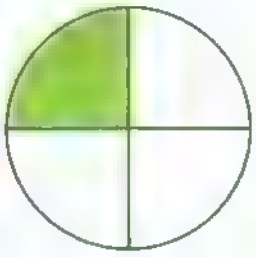






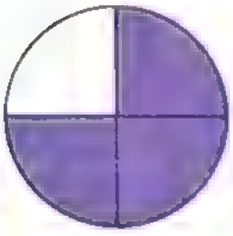
3.





More Fractions

A fraction is written with 2 numerals.

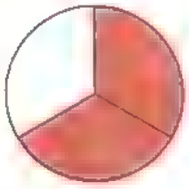
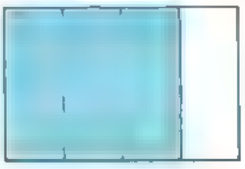
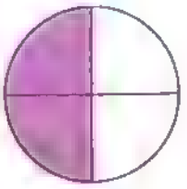


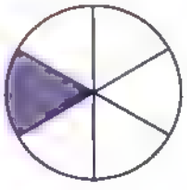
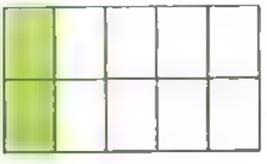
$= \frac{3}{4}$

The top number (numerator) tells how many equal pieces in the fraction.

The bottom number (denominator) tells the total number of equal pieces.

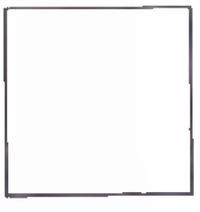
Write the fraction for each diagram.

1.  $\frac{2}{3}$  ____  ____ ____

2. ____  ____  ____ ____

Divide the shape into equal pieces and shade the fractions.

3. $\frac{3}{4}$ $\frac{1}{2}$ $\frac{2}{3}$

4. $\frac{3}{6}$ $\frac{2}{5}$  $\frac{2}{4}$

*SKILL: understanding a fraction of a region

Fraction of a Set

$\frac{2}{3}$

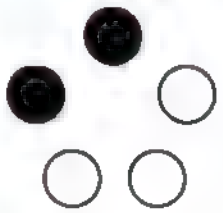
2 of the 3 Pokémon are Charmander.
2/3 of the Pokémon are Charmander.

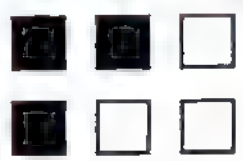
A fraction can also be used to describe a part of a set. The denominator (bottom number) tells how many in the set. The numerator (top number) tells how many pieces in the fraction.

Tell the fraction of each set that is shaded.

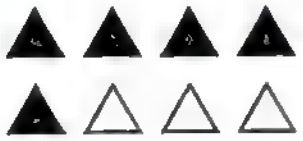
1.

$\frac{3}{4}$





2.

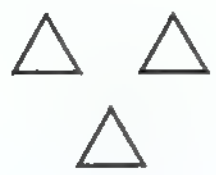


Shade the fraction of each set.

3.

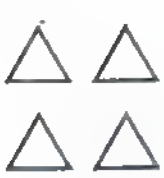
$\frac{1}{2}$

$\frac{3}{4}$

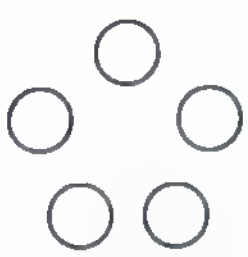


$\frac{1}{3}$

4.



$\frac{1}{4}$



$\frac{2}{5}$

$\frac{4}{6}$

Equal Fractions

$\frac{2}{8}$

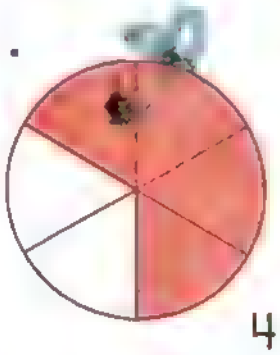
The first circle is divided into 8 pieces. It has 2 pieces shaded.

$\frac{1}{4}$

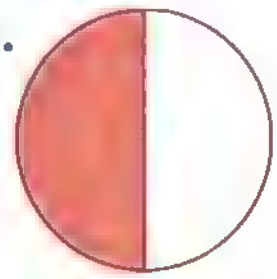
The second circle is divided into 4 pieces. It has 1 piece shaded.

Both circles are shaded the same amount.

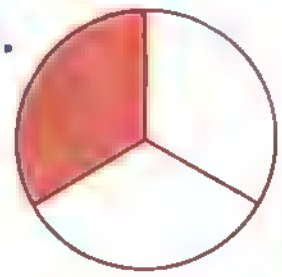
✎ Draw lines between the fractions that are equal. Label each fraction.

1. 

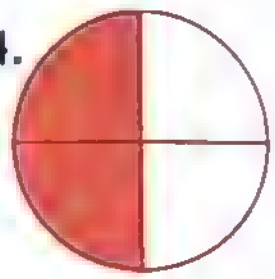
$\frac{4}{6}$

2. 

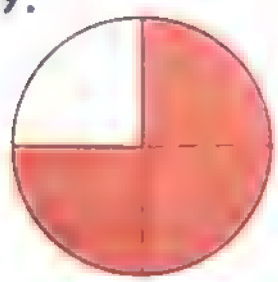
____

3. 

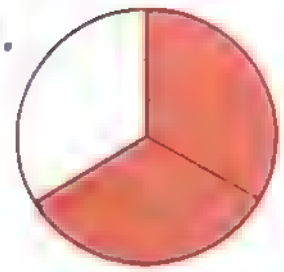
____

4. 

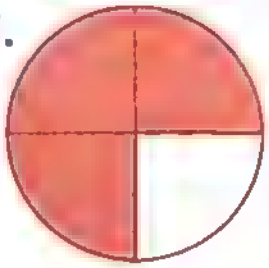
____

9. 

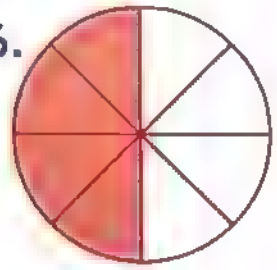
____

8. 

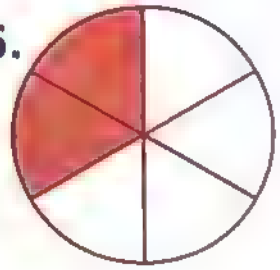
____

7. 

____

6. 

____

5. 

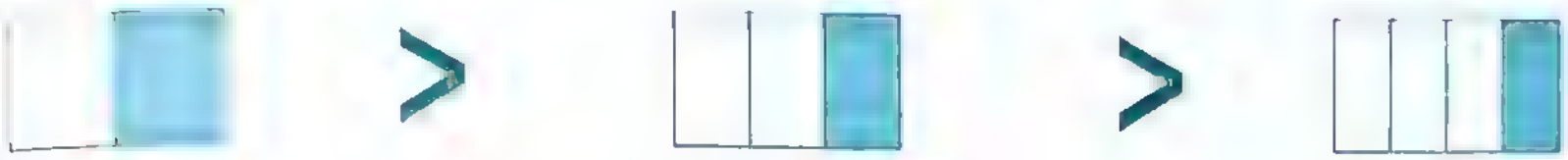
____

✎ Use the diagrams to help fill in the blanks.

10. $\frac{3}{4} = \frac{\quad}{8}$ $\qquad \frac{1}{3} = \frac{\quad}{6}$

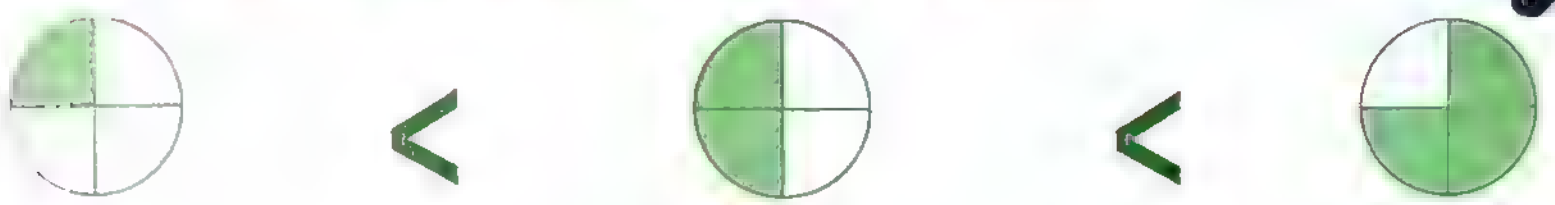
11. $\frac{4}{6} = \frac{\quad}{3}$ $\qquad \frac{1}{2} = \frac{\quad}{4} = \frac{\quad}{8}$

Compare Fractions



$\frac{1}{2}$ is greater than $\frac{1}{3}$ is greater than $\frac{1}{4}$

When the numerator is the same, the fraction with the smaller denominator is greater.



$\frac{1}{4}$ is less than $\frac{2}{4}$ is less than $\frac{3}{4}$

When the denominator is the same, the fraction with the larger numerator is greater.

In each pair of fractions, circle the one that is greater. Then use the letter beneath it to solve the riddle.

1.	$\frac{1}{2}$	$\frac{1}{4}$	2.	$\frac{1}{6}$	$\frac{5}{6}$	3.	$\frac{2}{3}$	$\frac{2}{5}$	4.	$\frac{1}{5}$	$\frac{3}{5}$
	I	**F**		**E**	**N**		**T**	**G**		**O**	**E**
5.	$\frac{3}{8}$	$\frac{3}{4}$	6.	$\frac{4}{10}$	$\frac{3}{10}$	7.	$\frac{1}{4}$	$\frac{3}{4}$	8.	$\frac{4}{5}$	$\frac{4}{6}$
	S	**R**		**M**	**K**		**L**	**E**		**D**	**L**
9.	$\frac{5}{8}$	$\frac{7}{8}$	10.	$\frac{6}{10}$	$\frac{6}{8}$	11.	$\frac{2}{4}$	$\frac{2}{8}$	12.	$\frac{5}{9}$	$\frac{7}{9}$
	R	**I**		**U**	**A**		**T**	**S**		**R**	**E**

At what level does a student at Pokémon Technical have the equivalent of 4 badges?

___	___	___	___	___	___	___	___	___	___	___	___
1	2	3	4	5	6	7	8	9	10	11	12

Divide and Break the Code

Division is just the reverse of multiplication. The same group of Poké Balls that show multiplication can also show division.

There are 12 Poké Balls in all.

Each row has 3 Poké Balls.

Division asks the question:

How many rows of 3 Poké Balls in 12?

Since $3 \times 4 = 12$, then $3 \overline{)12}$ $\quad 12 \div 3 = 4$

Divide. Write the letter that is above each answer in the correct space below to find out where Brock was Pokémon Gym leader.

Y	W	P	R
$2 \overline{)14}$	$3 \overline{)27}$	$5 \overline{)30}$	$4 \overline{)20}$
7			

T	C	E	I
$3 \overline{)9}$	$2 \overline{)4}$	$4 \overline{)16}$	$3 \overline{)24}$

6	4	9	3	4	5

2	8	3	7

*SKILL: dividing by two, three, four, and five

Remainders

Often division doesn't come out even. The part that is left over is called the remainder, written R.

$$\begin{array}{r} 4 \\ 3\overline{)14} \\ 12 \\ \hline 2 \end{array}$$

→ Subtract to find how many are left over. (4 x 3)

quotient → 4 R 2 → remainder

divisor → 3 ⟌ 14 → dividend

12

2

Divide.

1. $2\overline{)9}$ R

2. $4\overline{)25}$ R

3. $5\overline{)18}$ R

4. $3\overline{)20}$ R

5. $4\overline{)14}$ R

6. $2\overline{)19}$ R

7. $6\overline{)35}$ R

8. $3\overline{)13}$ R

9. $5\overline{)39}$ R

Long Division

Step 1: Divide

$$3\overline{)75}$$ Divide the tens.
7 tens ÷ 3 = 2 tens and some left over.

Step 2: Multiply

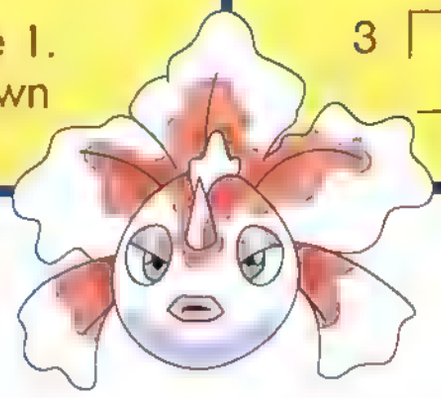
$$\begin{array}{r} 2 \\ 3\overline{)75} \\ 6 \end{array}$$ 2 x 3 = 6
Write the 6 under the 7.

Step 3: Subtract

$$\begin{array}{r} 2 \\ 3\overline{)75} \\ -6 \\ \hline 15 \end{array}$$ 7 − 6 = 1
Write the 1.
Bring down the 5.

Step 4: Divide

$$\begin{array}{r} 25 \\ 3\overline{)75} \\ 6 \\ \hline 15 \end{array}$$ Divide the ones.
15 ÷ 3 = 5
Write the complete answer.



Divide.

1. $2\overline{)94}$ → $\begin{array}{r} 47 \\ 8 \\ \hline 14 \\ 14 \\ \hline 0 \end{array}$

2. $4\overline{)76}$

3. $5\overline{)85}$

4. $2\overline{)138}$

5. $3\overline{)111}$

6. $6\overline{)126}$

7. $4\overline{)108}$

8. $5\overline{)270}$

9. $7\overline{)329}$

*SKILL: practicing long division

More Long Division

Step 1: Divide

$$7\overline{)158}\quad \text{2}$$

Divide the tens.
15 tens ÷ 7 = 2 tens and some left over.

Step 2: Multiply

$$\begin{array}{r} 2 \\ 7\overline{)158} \\ 14 \end{array}$$

2 x 7 = 14
Write the 14 under the 5.

Step 3: Subtract

$$\begin{array}{r} 2 \\ 7\overline{)158} \\ -14 \\ 18 \end{array}$$

15 − 14 = 1
Bring down the 8.

Step 4: Divide

$$\begin{array}{r} 22\text{R}4 \\ 7\overline{)158} \\ 14 \\ 18 \\ 14 \\ 4 \end{array}$$

18 ÷ 7 = 2R4
Write the remainder in the quotient.

Divide.

1. $3\overline{)140}$ — 46 R 2; 12; 20; 18; 2

2. $5\overline{)88}$

3. $8\overline{)204}$

4. $4\overline{)153}$

5. $7\overline{)425}$

6. $6\overline{)357}$

7. $3\overline{)103}$

8. $4\overline{)231}$

9. $9\overline{)618}$

Big-Time Multiplication

Here is how to multiply by 2-digit numbers.

Multiply by ones.	Multiply by tens.	Add the partial products.
33	32	
844	844	844
x 79	x 79	x 79
7,596	7,596	7,596 ← These are
	59,080	+59,080 ← partial products
		66,676

Multiply.

1.

11	25		
x 33	x 15		
33			
330			
363			

2.

41	43	27	37
x 24	x 65	x 32	x 18

3.

79	56	79	59
x 37	x 85	x 64	x 67

4.

990	604	555	982
x 32	x 94	x 54	x 23

*SKILL: multiplying by two-digit numbers

Estimating

You can estimate sums and differences by rounding numbers.

First round the top number.
Then round the bottom number.
Add or subtract to get your estimated answer.

Then add or subtract the real problem.
See how close your estimate is.

Estimate by rounding to the nearest ten. Then add or subtract.

1. $\begin{array}{r} 78 \\ +\ 11 \\ \hline 89 \end{array} \rightarrow \begin{array}{r} 80 \\ +\ 10 \\ \hline 90 \end{array}$ $\quad$ $\begin{array}{r} 95 \\ -\ 77 \\ \hline 18 \end{array} \rightarrow \begin{array}{r} 100 \\ -\ 80 \\ \hline 20 \end{array}$ $\quad$ $\begin{array}{r} 78 \\ +\ 94 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$

2. $\begin{array}{r} 87 \\ +\ 81 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$ $\quad$ $43 \rightarrow \_\_\_\_$ $\quad$ $\begin{array}{r} \\ +\ 21 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 81 \\ -\ 27 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$

3. $\begin{array}{r} 96 \\ -\ 49 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 64 \\ -\ 32 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 88 \\ -\ 65 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$

Estimate by rounding to the nearest hundred. Then add or subtract.

4. $\begin{array}{r} 817 \\ +871 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 272 \\ +327 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 714 \\ +550 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$

5. $\begin{array}{r} 551 \\ -261 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 494 \\ -432 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$ $\quad$ $\begin{array}{r} 386 \\ -214 \\ \hline \end{array} \rightarrow \begin{array}{r} \_\_\_\_ \\ \_\_\_\_ \\ \hline \end{array}$

Before you check your answers, look at each estimated answer.
Does it make sense?

Addition Brush-up

Here is how you add 4-digit numbers.

Add ones.

3,456
+ 3,511
7

Add tens.

3,456
+ 3,511
67

Add hundreds.

3,456
+ 3,511
967

Add thousands.

3,456
+ 3,511
6,967

Add. Find the answers to work the code.

514 + 201	743 + 126	612 + 322	250 + 537
J 715	**P**	**R**	**O**

Write the letter beside your answer in the correct boxes down below.

341 + 413	405 + 232	712 + 165	124 + 521
F	**E**	**A**	**L**

3,543 +3,423	3,064 +2,034	2,441 +1,515
N	**T**	**V**

What are the 3 kinds of Pokémon that Eevee can evolve into?

715	787	645	5,098	637	787	6,966
J						

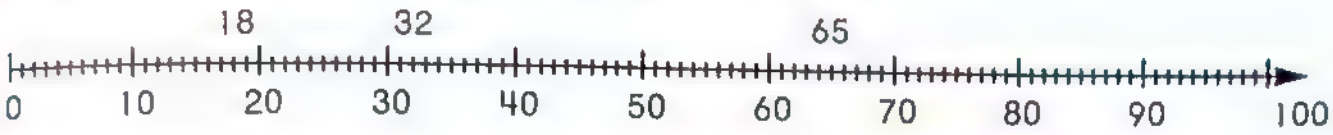
754	645	877	934	637	787	6,966

3,956	877	869	787	934	637	787	6,966

*SKILL: adding three and four-digit numbers

Rounding Up and Down

Look at each number on the number line.



Round each number to the nearest ten.

18 is closer to 20. Round up.
32 is closer to 30. Round down.

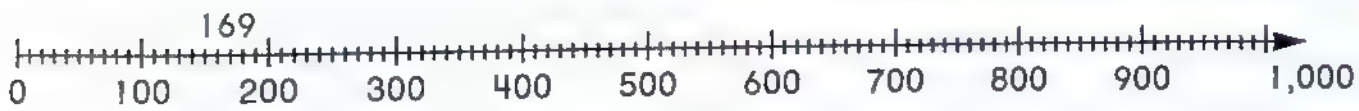
65 is exactly halfway between 60 and 70. Round up.

Number	Rounded to the nearest ten
18	→ 20
32	→ 30
65	→ 70

Round each number to the nearest ten.

1. 11 → 10
2. 34 → _____
3. 47 → _____
4. 89 → _____
5. 25 → _____
6. 26 → _____
7. 163 → _____
8. 214 → _____

Think of counting by hundreds.



Round each number to the nearest hundred.

9. 169 → 200
10. 614 → _____
11. 225 → _____
12. 59 → _____
13. 432 → _____
14. 150 → _____
15. 783 → _____
16. 395 → _____

Multiplying by 10

10 x 4 = 40
10 x 40 = 400
10 x 53 = 530
10 x 72 = 720

RULE: To multiply by 10, add one zero to the number being multiplied.

Do you see a pattern?

Multiply.

1. 10 x 14 = 140 10 x 12 = _____

2. 10 x 10 = _____ 10 x 31 = _____

3. 10 x 90 = _____ 10 x 80 = _____

4.

19	16	22	59
x 10	x 10	x 10	x 10
190			

5.

60	82	48	99
x 10	x 10	x 10	x 10

*SKILL: multiplying by ten

Multiplying by Tens

Multiply **10 x 38.** When you multiply by 10, you multiply by 1 first and add a zero to the answer because there is one zero in 10.

$$\begin{array}{r} 38 \\ \times\ 10 \\ \hline 0 \end{array} \qquad \begin{array}{r} 38 \\ \times\ 10 \\ \hline 380 \end{array}$$

Multiply **20 x 38.** The same thing happens when you multiply by 20, 30, 40, 50, 60, 70, 80, or 90. For example:

Write a zero in the the one's place. Then, multiply 38 x 2.

$$\begin{array}{r} 38 \\ \times\ 20 \\ \hline 0 \end{array} \qquad \begin{array}{r} 38 \\ \times\ 20 \\ \hline 760 \end{array}$$

Multiply.

1. 40 x 30 = 1,200 30 x 21 = _____ 70 x 20 = _____

2.

16	6	16	76	14	2
x 20	x 20	x 20	x 20	x 20	x 20
320					

Bright Ideas

Do you see a pattern?

$$\begin{array}{r} 5 \\ \times\ 10 \\ \hline 50 \end{array} \qquad \begin{array}{r} 5 \\ \times\ 100 \\ \hline 500 \end{array} \qquad \begin{array}{r} 5 \\ \times\ 1000 \\ \hline 5{,}000 \end{array}$$

$$\begin{array}{r} 14 \\ \times\ 10 \\ \hline 140 \end{array} \qquad \begin{array}{r} 14 \\ \times\ 100 \\ \hline 1{,}400 \end{array} \qquad \begin{array}{r} 14 \\ \times\ 1000 \\ \hline 14{,}000 \end{array}$$

Now see if you can multiply by a million:

5 x 1,000,000 =

_____

Help!

Divide. Solve the problem on each block to help Ash get to Pikachu. Time yourself. Can you finish the problems in less than five minutes?

1. $2\overline{)6}$ = 3

2. $2\overline{)4}$

3. $3\overline{)9}$

4. $1\overline{)4}$

5. $3\overline{)6}$

6. $3\overline{)18}$

7. $6\overline{)24}$

8. $5\overline{)25}$

9. $5\overline{)15}$

10. $3\overline{)12}$

11. $4\overline{)28}$

12. $6\overline{)54}$

13. $7\overline{)35}$

14. $5\overline{)40}$

15. $7\overline{)42}$

16. $6\overline{)48}$

17. $7\overline{)56}$

18. $5\overline{)45}$

19. $7\overline{)49}$

20. $9\overline{)36}$

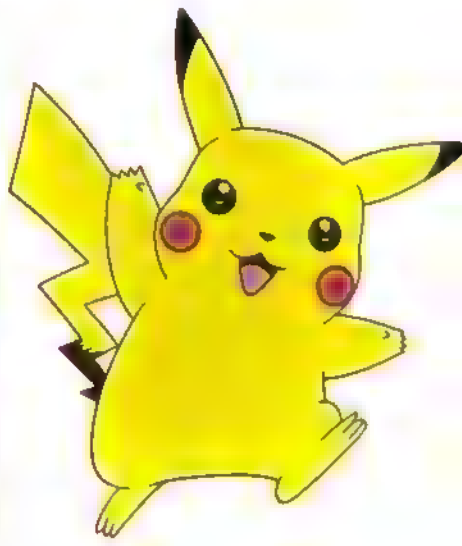
21. $6\overline{)12}$

22. $8\overline{)64}$

23. $9\overline{)81}$

24. $7\overline{)63}$

25. $8\overline{)32}$



*SKILL: using basic division facts (to 81 ÷ 9)

Answers

Page 1

1. 2,000 + 200 + 40 + 7
   2 thousands + 2 hundreds + 4 tens + 7 ones
2. 7,000 + 800 + 30 + 6
   7 thousands + 8 hundreds + 3 tens + 6 ones
3. 9,000 + 500 + 70 + 0
   9 thousands + 5 hundreds + 7 tens + 0 ones
4. 3,000 + 000 + 70 + 8
   3 thousands + 0 hundreds + 7 tens + 8 ones

Page 2

1. 810, 902, 1,190
2. 9,001, 5,522, 7,024
3. 9,008, 13,331, 10,492
4. 9,096, 15,387, 19,842

Page 3

Across:

1. 128	3. 401	5. 223
6. 574	7. 1,002	9. 322
10. 55	11. 2,331	

Down:

1. 1,330	2. 85	4. 1,502
5. 24	8. 251	

Page 4

1. 432, 107
2. 590, 3,748
3. 6,746, 847
4. 5,978, 5,634
5. 3,981, 894

Page 5

1. 1,691, 4,342, 6,184
2. 3,998, 6,997, 655
3. 1,326, 2,846, 56
4. 782, 1,894, 1,060
5. 4,527, 2,611, 1,489

Page 6

1. 68	2. 69			
3. 86	4. 148			
5. 126	6. 208	7. 246		
8. 450	9. 249	10. 49		

Page 7

1. 648, 996, 3,248, 679, 1,488
2. 4,550, 1,286, 2,496, 3,006
3. 826, 3,577, 1,869
4. 488, 1,668
5. 3,505

Page 8

1. 235, 114, 860, 378
2. 856, 118, 978, 588
3. 387, 1,251, 150, 312
4. 351, 496, 384, 6354

Page 9

1. 378, 72, 368, 415
2. 564, 315, 228, 476
3. 112, 171, 132, 460
4. 200, 222, 336, 85
5. 174, 111, 256, 375

Page 10

1. 2,172, 1,280, 2,926, 1,917
2. 3,360, 981, 352, 7,400
3. 2,170, 6,528, 2,247, 918

Page 11

T — 1,716	C — 348
N — 656	L — 708
E — 762	R — 465
H — 1,035	I — 1,968
G — 3,241	M — 1,404
Y — 1,216	O — 585
V — 3,546	Answer: The Vermilion City Gym

Page 12

1. 222	7. 2,442	13. 1,442
2. 852	8. 2,709	14. 284
3. 166	9. 1,569	15. 3,696
4. 2,048	10. 2,848	16. 375
5. 1,863	11. 1,690	
6. 1,652	12. 669	

Path: 1, 2, 6, 7, 11, 15, 16

Page 13

1. 12, 6, 20, 4
2. 7, 7, 8, 8
3. 2, 6
4. 4, 7
5. 7, 9
6. 8, 5

Page 14

1. 6, 9
2. 4, 5
3. 7, 8, 3
4. 9, 5, 6
5. 3, 8, 4

Page 15

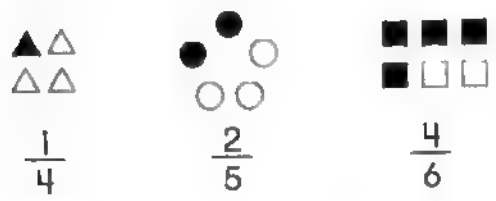
1. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{2}$
2. $\frac{1}{6}$, $\frac{1}{3}$, $\frac{1}{4}$
3. $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{5}$

Page 16

1. $\frac{2}{3}$, $\frac{3}{4}$, $\frac{2}{4}$, $\frac{2}{5}$
2. $\frac{2}{8}$, $\frac{1}{6}$, $\frac{2}{10}$, $\frac{1}{4}$
3.
   $\frac{3}{4}$ $\frac{1}{2}$ $\frac{2}{3}$
4.
   $\frac{3}{6}$ $\frac{2}{5}$ $\frac{2}{4}$

Answers

Page 17

1. $\frac{3}{4}$, $\frac{2}{5}$, $\frac{3}{6}$, $\frac{1}{3}$
2. $\frac{3}{5}$, $\frac{5}{8}$, $\frac{1}{4}$, $\frac{4}{10}$
3. $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{3}$
4.  $\frac{1}{4}$, $\frac{2}{5}$, $\frac{4}{6}$

Page 18

1. $\frac{4}{6}$
2. $\frac{1}{2}$
3. $\frac{1}{3}$
4. $\frac{2}{4}$
5. $\frac{2}{6}$
6. $\frac{4}{8}$
7. $\frac{3}{4}$
8. $\frac{2}{3}$
9. $\frac{3}{4}$
10. 6, 2
11. 2, 2, 4

Page 19

1. $\frac{1}{2}$
2. $\frac{5}{6}$
3. $\frac{2}{3}$
4. $\frac{3}{5}$
5. $\frac{3}{4}$
6. $\frac{4}{10}$
7. $\frac{3}{4}$
8. $\frac{4}{5}$
9. $\frac{7}{8}$
10. $\frac{6}{8}$
11. $\frac{2}{4}$
12. $\frac{7}{9}$

Answer: Intermediate

Page 20

Y — 7	W — 9	P — 6	R — 5
T — 3	C — 2	E — 4	I — 8

Answer: Pewter City

Page 21

1. 4 R1
2. 6 R1
3. 3 R3
4. 6 R2
5. 3 R2
6. 9 R1
7. 5 R5
8. 4 R1
9. 7 R4

Page 22

1. 47
2. 19
3. 17
4. 69
5. 37
6. 21
7. 27
8. 54
9. 47

Page 23

1. 46 R2
2. 17 R3
3. 25 R4
4. 38 R1
5. 60 R5
6. 59 R3
7. 34 R1
8. 57 R3
9. 68 R6

Page 24

1. 363, 375
2. 984, 2,795, 864, 666
3. 2,923, 4,760, 5,056, 3,953
4. 31,680, 56,776, 29,970, 22,586

Page 25

1.	78 + 11 = 89	80 + 10 = 90	95 − 77 = 18	100 − 80 = 20	78 + 94 = 172	80 + 90 = 170
2.	87 + 81 = 168	90 + 80 = 170	43 + 21 = 64	40 + 20 = 60	81 − 27 = 54	80 − 30 = 50
3.	96 − 49 = 47	100 − 50 = 50	64 − 32 = 32	60 − 30 = 30	88 − 65 = 23	90 − 70 = 20
4.	817 + 871 = 1,688	800 + 900 = 1,700	272 + 327 = 599	300 + 300 = 600	714 + 550 = 1,264	700 + 600 = 1,300
5.	551 − 261 = 290	600 − 300 = 300	494 − 432 = 62	500 − 400 = 100	386 − 214 = 172	400 − 200 = 200

Page 26

J — 715	P — 869	
R — 934	O — 787	
F — 754	E — 637	
A — 877	L — 645	
N — 6,966	T — 5,098	V — 3,956

Answers: Jolteon, Flareon, Vaporeon

Page 27

1. 10	5. 30	9. 200	13. 400
2. 30	6. 30	10. 600	14. 200
3. 50	7. 160	11. 200	15. 800
4. 90	8. 210	12. 100	16. 400

Page 28

1. 140, 120
2. 100, 310
3. 900, 800
4. 190, 160, 220, 590
5. 600, 820, 480, 990

Page 29

1. 1,200, 630, 1,400
2. 320, 120, 320, 1,520, 280, 40
   5,000,000

Page 30

1. 3	6. 6	11. 7	16. 8	21. 2
2. 2	7. 4	12. 9	17. 8	22. 8
3. 3	8. 5	13. 5	18. 9	23. 9
4. 4	9. 3	14. 8	19. 7	24. 9
5. 2	10. 4	15. 6	20. 4	25. 4

Grade 4

$$\begin{array}{r} 56 \\ \times\ \ 6 \\ \hline \end{array}$$

© 2000 Nintendo

answer: 336

Grade 4

$$\begin{array}{r} 17 \\ \times\ \ 5 \\ \hline \end{array}$$

© 2000 Nintendo

answer: 85

Grade 4

$$\begin{array}{r} 639 \\ \times\ \ 3 \\ \hline \end{array}$$

© 2000 Nintendo

answer: 1,917

Grade 4

$$\begin{array}{r} 749 \\ \times\ \ 3 \\ \hline \end{array}$$

© 2000 Nintendo

answer: 2,247

Grade 4

Round to the nearest ten.

135

© 2000 Nintendo

answer: 140

Grade 4

Round to the nearest hundred.

163

© 2000 Nintendo

answer: 200

Grade 4

Round to the nearest hundred.

359

© 2000 Nintendo

answer: 400

Grade 4

$$\begin{array}{r} 59 \\ \times\ 67 \\ \hline \end{array}$$

© 2000 Nintendo

answer: 3,953

Master Level

#057
PRIMEAPE™

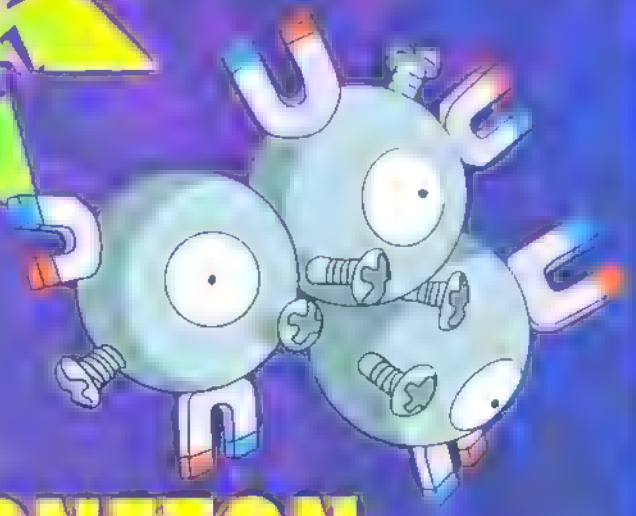
Master Level

#135
JOLTEON™

Master Level

#012
BUTTERFREE™

Master Level

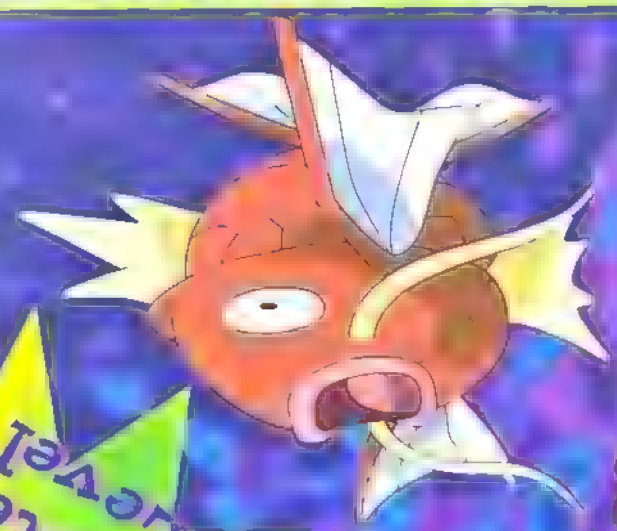


#082
MAGNETON™

Master Level

#105
MAROWAK™

Master Level



#129
MAGIKARP™

Master Level

#097
HYPNO™

Master Level

#026
RAICHU™

Grade 4

$$\begin{array}{r} 604 \\ \times\ 94 \\ \hline \end{array}$$

© 2000 Nintendo

answer: 56,776

Grade 4

$$\begin{array}{r} 16 \\ \times\ 50 \\ \hline \end{array}$$

© 2000 Nintendo

answer: 800

Grade 4

$$\begin{array}{r} 41 \\ \times\ 24 \\ \hline \end{array}$$

© 2000 Nintendo

answer: 984

Grade 4

$7\overline{)329} =$

© 2000 Nintendo

answer: 47

Grade 4

$3\overline{)111} =$

© 2000 Nintendo

answer: 37

Grade 4

$6\overline{)425} =$

© 2000 Nintendo

answer: 70 R5

Grade 4

$3\overline{)613} =$

© 2000 Nintendo

answer: 204 R1

Grade 4

$$\begin{array}{r} 5 \\ \times\ 1000 \\ \hline \end{array}$$

© 2000 Nintendo

answer: 5,000

Master Level

#61
POLIWHIRL™

Master Level

#22
FEAROW™

Master Level

#163
EXEGGUTOR™

Master Level

#91
CLOYSTER™

Master Level

#144
ARTICUNO™

Master Level

#06
CHARIZARD™

Master Level

#127
PINSIR™

Master Level

#34
NIDOKING™

N0 2 1 00

Pokémon™ Math Challenge

Plus 32 Flash Cards

Become a Pokémon Math Master!

The challenge is up to you! Here are your favorite Pokémon helping to improve your math skills in this all-new collection of math puzzles, problems, and games. Special Pokémon Flash Cards included to help you rise from Trainer to Master.

Pokémon Math Challenge Grade 2
Pokémon Math Challenge Grade 3
Pokémon Math Challenge Grade 4
Pokémon Math Challenge Grades 2-3
Pokémon Math Challenge Grades 3-4
Pokémon Math Challenge Grades 4-5
32 Flash Cards
Gotta Catch 'em all!

$5.99 US
30614-59
ISBN 0-307-30614-3
78513
0 33500 00599 2

© 1995, 1996, 1998 Nintendo, CREATURES, GAME FREAK. ™ & ® are trademarks of Nintendo. © 2000 Nintendo. All Rights Reserved.

A Golden Book®
GOLDEN BOOKS®, A GOLDEN BOOK®, STEP AHEAD®, G DESIGN® and the distinctive gold spine are registered trademarks of Golden Books Publishing Company Inc., New York, New York 10106.
No part of this book may be reproduced or copied in any form without written permission from the publisher. Produced in U.S.A.